

### Amendments to the Claims

1. (Currently Amended) A method of interference cancellation in a multiple access communication channel comprising:

receiving a signal including at least a first data component for a first channel within the multiple access communication channel and a second data component for a second channel within the multiple access communication channel on the communication channel;

determining a characteristic of the multiple access communication channel;

estimating an interference factor caused by the second data component received on the multiple access communication channel based upon the characteristic;

using the interference factor to cancel the second data component from the signal;

and

recovering the first data component from the signal.

2. (Original) The method of claim 1, wherein the interference factor comprises one of a data estimate and a partial interference cancellation coefficient.

3. (Original) The method of claim 1, wherein the signal comprises a spread spectrum code division multiple access system signal.

4. (Original) The method of claim 1, wherein the step of estimating comprises applying a function to the characteristic.

5. (Original) The method of claim 4, wherein the function comprises a piece-wise linear estimation of the hyperbolic tangent.

6. (Previously Amended) The method of claim 4, wherein the function comprises a piece-wise linear estimation of a probability of error function.

7. (Original) The method of claim 1, wherein the characteristic comprises one of a signal estimation and a noise estimation.

8. (Currently Amended) In a receiver including interference cancellation in a multiple access communication channel, the receiver adapted to receive a signal for the communication channel including a first data component for a first channel within the multiple access communication channel and a second data component for a second channel within the multiple access communication channel, a method of providing a data estimate comprising the steps of:

estimating a signal-to-noise ratio for the signal;

applying a function to the signal-to-noise ratio to determine a soft data estimate caused by the second data component received on the multiple access communication channel on a power control group by power control group basis for each of the first data component and the second data component; and

subtracting from the aggregate received signal the signal estimate involving soft data estimate of the second data component.

9. (Original) The method of claim 8, wherein the step of estimating a signal-to-noise ratio comprises estimating a first signal term and second signal term.

10. (Original) The method of claim 8, wherein the function comprises a piece-wise linear estimation of the hyperbolic tangent.

11. (Currently Amended) In a receiver including partial interference cancellation in a multiple access communication channel, the receiver adapted to receive a signal for the communication signal including a first data component for a first channel within the multiple access communication channel and a second data component for a second channel within the multiple access communication channel, a method of providing a partial interference cancellation coefficient comprising the steps of:

estimating a first signal term and a second signal term of the signal;

applying a function to a signal-to-noise ratio to determine an intermediate parameter caused by the second data component received on the communication channel on a power control group by power control group basis;

using the intermediate parameter to determine a partial interference cancellation coefficient.

12. (Previously Amended) The method of claim 11, comprising the step of using the intermediate parameter to determine a second partial interference cancellation coefficient.
13. (Previously Amended) The method of claim 11, wherein the function comprises a piece-wise linear estimation of a probability of error function.
14. (Previously Presented) The method of claim 2, wherein the partial interference cancellation coefficient is based on estimates of the received signal that involves the first data component and a channel estimate.
15. (Previously Presented) The method of claim 8, wherein the step of applying includes a partial interference cancellation coefficient that is based on estimates of the received signal that involves the first data component and a channel estimate.
16. (Previously Presented) The method of claim 11, wherein the step of applying includes a partial interference cancellation coefficient that is based on estimates of the received signal that involves the first data component and a channel estimate.